NERITINA VIRGINEA IN TOWN CREEK AT MONTEGO BAY, JAMAICA, B. W. I.

BY E. A. ANDREWS

Montego Bay is a growing town of some thousands of inhabitants; in the west part is a very large spring covered by an old, ornate brick pillar with iron railings about the water exit; from this the large stream runs straight to the sea about a quarter of a mile between stone retaining walls, bounded on the west by a street and on the east by private properties, houses, the city mule-and-cart yard, and the large churchyard. The stream is about 20 feet wide with water one to three feet deep and considerable current. Two or three bridges cross it; the one nearest the sea lets pass the main road from east to west of the island with all the traffic; it receives surface drainage. The spring serves as water supply for washing, and in 1910 a covered wash-house near it ran its suds back into the stream; this has disappeared. Originally the spring was a large supply of drinking water but the city now has its own piped water.

The water front is not public, but walled or fenced off as private yards for the few large merchants whose grounds and buildings serve to accumulate logwood, sugar, etc., till date of shipment. The stream enters the sea or harbour between two such properties and its mouth is isolated except by passage through one of these yards, closed at night.

In July, 1910, in a flat bottom skiff we ascended the stream to near the spring and found bottom and side walls covered with countless small, 13-13½ mm. dark *Neritina virginea* with very many egg capsules, 3,005 *N. virginea* and 90 *N. punctulata,* small, and 37 *Neritilia succinea,* dwarf, were collected.

In 1932, not one *Neritina* could be found; natives said they used to be plentiful; one boy found just one dead shell jammed in at the spring. Men at work cleaning out one to two feet of sand from stream bottom could find no shells. In 1931, there was a cloudburst and some houses were swept away and floors inundated.

The boy who found one dead shell knew of some small shells at the mouth of the creek. These proved (July 6 and 8) to be as follows: on the west the wall at the mouth had been washed under so as to fall over backwards at a considerable angle. On this concrete slope, at the water's edge, were many very small dark snails variously blotched with yellow or white, with white apex and operculum, said to go up and down with the tides. Snails stand along 20 ft., a few to each square inch, as a scattered linear crowd. The tides are small and the harbour so protected that but a few inches pulse of ocean swell is visible at mouth of creek, leaving snails now 2 inches deep, now exposed to air. The fresh but dirty water runs out over the salt, and one can see it as a layer beneath which in the salt water corals still live with fresh water as their sky. Collected 212 nerites, strongly adherent.

Low down on the inclined cement grows a filamentous green alga, *Entomorpha erecta* (Lyng.) J. G. Agardh, and lower down small red algal tufts, and the snails were amongst this at times but at other times they crawled up on bare, apparently sterile, cement, going up and down with the tide and remaining only covered by a few inches of the fresh outflowing stream of water.

Density measurements showed a difference between surface and below as follows (to be corrected for temperature) July 8; at noon at surface.

Air	Water	Density	Air	Water	Density
	29.9 C.	1.013		29.8 C.	1.132
	29.6	1.018	30.4° C.	29.0	1.020
30° C.	29.0	1.022	30°	29.8	1.0136

Ten inches below surface the densities were: 1.023, 1.0235, 1.0202, 1.023.

Are these snails remnants of the *N. virginea* formerly so abundant?